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A new genus and species of cave-dwelling milliped from Guatemala (Diplopoda: Polydesmida)

by

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With 3 text figures

SUMMARY

The new generic and specific names *Chirrepeckia lyncilecta* are proposed for a minute polydesmoid obtained in Cueva Chirrepeck, Dept. Alta Verapaz, Guatemala. The family position of this genus cannot be established at this time because of confusion over the application of the name Trichopolydesmidae (heretofore used in a very broad sense to include a variety of small polydesmoids of the tropics and North Temperate zone).

Exploration of Guatemalan caves by Pierre Strinati during April, 1973, resulted in the collection of several interesting species of Diplopoda. These specimens were donated to the Museum d'histoire naturelle de Genève, and were subsequently placed in my hands for study by Dr. Bernd Hauser.

One of Dr. Strinati's novelties has already been described in an earlier number of this journal (HOFFMAN 1976). Consideration of another new form was however deferred in the hope that it might be included in a survey of Neotropical "trichopolydesmids" now in preparation, but as that endeavour seems fated to an indeterminate postponement, I am acceeding to the wishes of Dr. Hauser that the name of this species be validated for Dr. Strinati's use.

The creature in question belongs to a large and poorly-known group currently going under the name Trichopolydesmidae. Regrettably there is reason to think that this family, as now conceived, is extremely heterogeneous and must be rendered into several more discrete groups, of which it is entirely possible that the one containing the present new genus may have no available name. We can be sure that in any event the name Trichopolydesmidae cannot be used for Neotropical species. Until this entire problem has been resolved it would be reckless to set up a new family name, and I do not propose to do so here.

Chirrepeckia gen. nov.

Type species. — *C. lyncilecta*, sp. nov.

Diagnosis. — A genus of minute colorless polydesmoids in which the body of the male is composed of 19 segments. Pore formula normal, pores located near caudolateral angle of paranota; latter moderately large, the lateral edge evenly curved, without trace of marginal notches or indentations; metaterga with three transverse rows of bacilliform setae, the surface minutely granular. Head large, without modifications; antennae long, the 6th article greatly enlarged with a prominent sensory area on its outer surface, other articles unmodified. Legs and sterna of male unmodified.

Gonopod coxae large, subglobose, the surface smooth with a few dispersed setae, no coxal apophysis formed; telopodites simple, slender, crossing over each other near their midlength, prefemoral region small, setose, without trace of process; acropodite slender and slightly curved, apically a little broadened, a prominent slender acuminate postfemoral process on the ventrolateral surface; prostatic groove terminating at expanded apex of telopodite.

Remarks. — This so-far monotypic genus is perhaps related to *Irazunus*, as might be supposed at first glance at the gonopod structure. However, according to Attems' interpretation (1933) the elongate gonopod element in *Irazunus* is actually the prefemoral process, whereas the telopodite proper is reduced to a minute apically setose lobe carrying the short prostatic groove (as shown in his figs. 5 and 6). In the new species at hand it is evident that the groove extends to the apex of the major distal telopodite branch and that no prefemoral process is evident. The form of the paranota is likewise quite different in the two genera: laterally notched in *Irazunus*, smooth in *Chirrepeckia*.

There is also a superficial resemblence in gonopod structure to the form typical of the genus *Salvadoria*; the species of this genus however are much larger than *C. lyncilecta* and have the usual lateral indentations of the paranota. It is obvious that our present fragmentary knowledge of these small Mesoamerican millipeds cannot permit any kind of meaningful conjecture about affinities; far more of the fauna must first be discovered and described in detail.

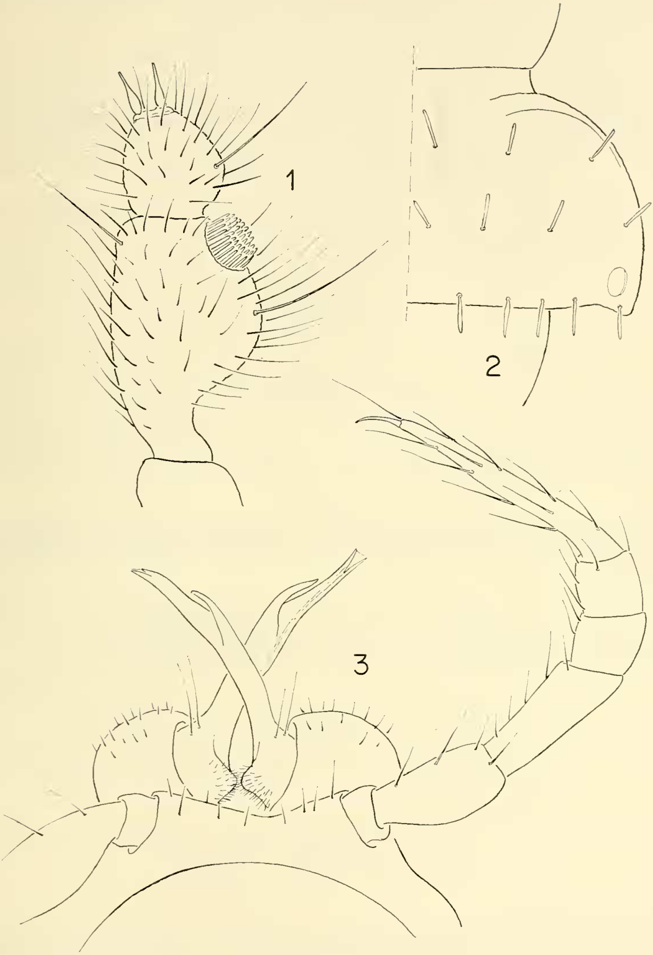
Chirrepeckia lyncilecta sp. nov. (fig. 1-3)

Material. — Male holotype (Mus. Geneve) from Cueva Chirrepeck (±1400 m), south of Coban, Dept. Alta Verapaz, Guatemala; April 6 or 8, 1973, Pierre Strinati legit.

Diagnosis. — With the characters of the genus; gonopods of the form shown in Figure 3.

Holotype. — Adult male, length of body about 3.8 mm (specimen curved and broken), maximum body width about 0.30 mm. Entire specimen now colorless, perhaps with white pigment in life. Body with 19 segments.

Head relatively large, as wide as body segments, front evenly convex and minutely setose, without modifications. Antennae long, extending back to 6th segment, 6th article greatly enlarged and provided with a prominent circular sensory field composed of numerous, densely packed stout sensory setae (Fig. 1); apical article with four long slender sensory cones.



FIGS. 1-3.

Chirrepeckia lyncilecta, sp. n.

Fig. 1: 6th and 7th antennal articles, showing sensory field and major setation. — Fig. 2: right side of midbody segment, dorsal aspect. — Fig. 3: 7th segment, showing gonopods in situ and left leg of the 8th pair, aboral aspect. Drawings from holotype, all X430.

Collum subhemispherical in outline, the anterior and lateral edges forming a continuous even arc; posterior edge nearly straight, forming an acute angle with lateral edge. Three transverse series of setae as usual in this group.

Prozona with microscopic squamous texture, stricture distinct, its anterior edge sharply defined; surface of metaterga minutely granular, each metatergum with three rows of short bacilliform setae, six in the anterior series, eight in the second, and about ten in the third row along posterior margin. Paranota of moderate size, set high on body and nearly horizontal, anterior and lateral edges forming continuous arc without indentations (Fig. 2); ozopores large and circular, set near the caudolateral angle on paranota of segments 5, 7, 9, 10, 12, 13, 15, 16, 17 and 18.

Sides of body without modifications (form of stigmata was not observed). Sterna relatively broad (about equal to length of femora), set with a few sparse setae, distinctly elevated above level of prozona. Legs of the form shown in Figure 3, the coxae small and inconspicuous, postfemora and tibiae somewhat enlarged, tarsi very long and slender. Postfemora of last two pairs of legs with a macroseta on dorsal side near the end, setae on the last legpair nearly as long as tarsi. Anterior legs and sterna unmodified.

Gonopod aperture relatively small, transversely oval; coxae large and subglobose, placed chiefly outside of body cavity, nearly in contact medially, their surface minutely granular to almost smooth, with a few small sparse setae. Telopodites long and slender, crossing each other near their midlength, prefemoral region slightly enlarged, set with minute setae, no prefemoral process evident. Acropodite with a slender curved acuminate process on the ventrolateral side at about two-thirds of the length, apically somewhat expanded and laminate; prostatic groove extending to end of telopodite.

Etymology. — The specific name alludes to the manifest visual acuity of the collector; such a minute and pallid milliped would be overlooked by all but the most discriminating eye.

Remarks. — Because of the limited material, the gonopods were not removed from the body of the type specimen. It is to be hoped that additional males from the type locality will be available to permit a more detailed description of the genitalia.

REFERENCES

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